

**isc Silicon NPN Power Transistor**

**BU2506DF**

**DESCRIPTION**

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 700V$  (Min)
- High Switching Speed
- Built-in Damper Diode

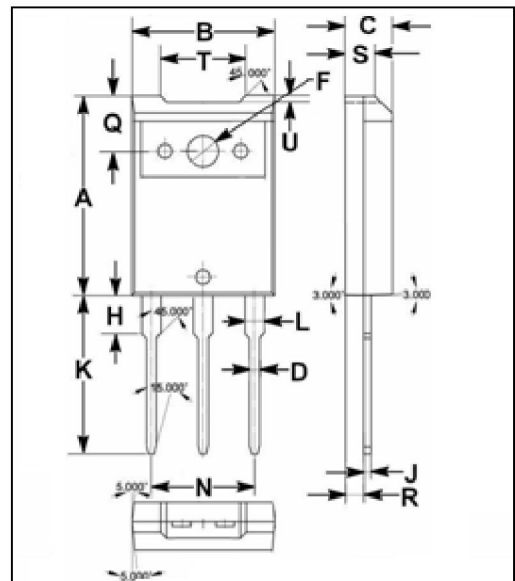
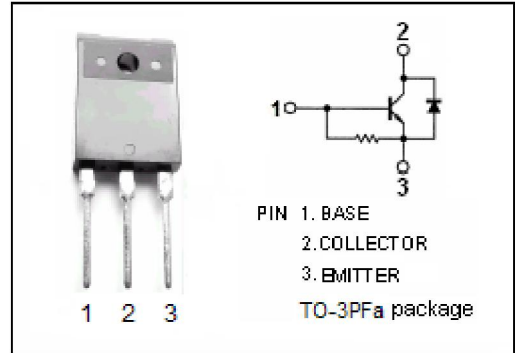
**APPLICATIONS**

- Designed for use in horizontal deflection circuits of color TV receivers.

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CES}$	Collector- Emitter Voltage( $V_{BE} = 0$ )	1500	V
$V_{CEO}$	Collector-Emitter Voltage	700	V
$V_{EBO}$	Emitter-Base Voltage	7.5	V
$I_C$	Collector Current- Continuous	5	A
$I_{CM}$	Collector Current-Peak	8	A
$I_B$	Base Current- Continuous	3	A
$I_{BM}$	Base Current-Peak	5	A
$P_C$	Collector Power Dissipation @ $T_c=25^{\circ}C$	45	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-65~150	$^{\circ}C$

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.8	$^{\circ}C/W$



DIM	mm	
	MIN	MAX
A	20.70	21.30
B	14.70	15.30
C	4.80	5.20
D	0.90	1.10
F	3.20	3.40
H	3.70	4.30
J	0.50	0.70
K	16.40	17.00
L	1.90	2.10
N	10.80	11.00
Q	5.60	6.00
R	1.80	2.20
S	3.10	3.50
T	8.70	9.30
U	0.55	0.75

## isc Silicon NPN Power Transistor

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## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 100mA; I <sub>B</sub> = 0, L= 25mH	700			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 600mA; I <sub>C</sub> = 0	7.5			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 3A; I <sub>B</sub> = 0.79A			5.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 3A; I <sub>B</sub> = 0.79A			1.1	V
I <sub>CES</sub>	Collector Cutoff Current	V <sub>CE</sub> = 1500V; V <sub>BE</sub> = 0 V <sub>CE</sub> = 1500V; V <sub>BE</sub> = 0; T <sub>C</sub> =125°C			1.0 2.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7.5V; I <sub>C</sub> = 0	95		208	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 0.3A; V <sub>CE</sub> = 5V		12		
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 3A; V <sub>CE</sub> = 5V	3.8		7.5	
V <sub>ECF</sub>	C-E Diode Forward Voltage	I <sub>F</sub> = 3A			2.0	V
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1MHz		47		pF

## Switching times

t <sub>stg</sub>	Storage Time	I <sub>C</sub> = 3A, I <sub>B(end)</sub> = 0.67A; C <sub>FB</sub> = 9.4nF L <sub>C</sub> = 1.35mH; L <sub>B</sub> = 8 μ H; -V <sub>BB</sub> = 4V; (-dI <sub>B</sub> /dt= 0.45A/μ s)			6.0	μ s
t <sub>f</sub>	Fall Time				0.5	μ s